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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,220	11/20/2001	Terence J. Knowles	13051US03	6206

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EXAMINER	
NGUYEN, KIMNHUNG T	
ART UNIT	**PAPER NUMBER**
2629	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/998,220	KNOWLES ET AL.	
	Examiner	Art Unit	
	Kimnhung Nguyen	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-26,28 and 29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *29* is/are allowed.

6)☒ Claim(s) *21-26* is/are rejected.

7)☒ Claim(s) *28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Application has been examined. The claims 21-26 and 28-29 are pending. The examination results are as following.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scharff et al. (US 6,411,287).

Regarding claim 21, Scharff et al. discloses in figs 1 and 8, a feedback mechanism for an acoustic wave switch (see abstract, see sealing system for use with acoustic touchscreens) having a touch sensitive surface (see touch screen 101, fig. 1) comprising:

a deformable dome (see tension straps 703, see figs. 7, 8, see col. 6, lines 38-44) overlaying the touch sensitive surface (701) of the acoustic wave switch (fig. 8), the dome (703) being spaced from the touch sensitive surface (701) (see seal coupled to the frame, see col. 2, lines 20-21), and an acoustic wave absorbing material disposed between the deformable dome (703) and the touch sensitive surface (see col. 4, lines 1-4) such that in response to a force acting on the dome, the dome deforms and contacts the absorbing material and the absorbing material contacts the touch sensitive surface of the acoustic wave switch with sufficient pressure to actuate the acoustic wave switch (see fig. 1, see col. 4, lines 1-2, and fig. 8, col. 6, lines 55-65;

fig. 1 related to fig. 8). Scharff et al. does not disclose the dome (seal) in an unactuated position being spaced from the touch sensitive surface (701); however, Scharff et al. discloses an extremely small and uniform gap can be maintained between the seal housing and the touch surface (see col. 6, lines 61-62, this feature related to the dome in an unactuated position being spaced from the touch sensitive surface as claimed by the invention).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement an extremely small and uniform gap can be maintained between the seal housing and the touch surface as taught by Scharff et al. for producing the claimed invention because this would allow the designer to select from a wider range of sealing materials that still meet the acoustic signal absorption requirements of the system (see col. 6, lines 61-65).

Regarding claims 22, Scharff et al. discloses further discloses the acoustic wave absorbing material is mounted on the surface is mounted on a surface (see col. 6, lines 55-65). Regarding claim 23, Scharff et al. discloses further, wherein the acoustic wave absorbing material overlies the touch surface of the switch and is spaced from a surface of the dome (see col. 4, lines 1-4). Scharff et al. does not disclose the dome (seal) in an unactuated position being spaced from the touch sensitive surface (701); however, Scharff et al. discloses an extremely small and uniform gap can be maintained between the seal housing and the touch surface (see col. 6, lines 61-62, this feature related to the dome in an unactuated position being spaced from the touch sensitive surface as claimed by the invention).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement an extremely small and uniform gap can be maintained

between the seal housing and the touch surface as taught by Scharff et al. for producing the claimed invention because this would allow the designer to select from a wider range of sealing materials that still meet the acoustic signal absorption requirements of the system (see col. 6, lines 61-65).

4. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scharff et al. (US 6,411,287) in view of Selig et al. (US 6,492,978).

As to claim 24, Scharff et al. discloses in figs 1 and 8, a feedback mechanism for an acoustic wave switch (see abstract, see sealing system for use with acoustic touchscreens) having a touch sensitive surface (see touch screen 101, fig. 1) comprising:

a deformable dome (see tension straps 703, see figs. 7, 8, see col. 6, lines 38-44) overlaying the touch sensitive surface (701) of the acoustic wave switch (fig. 8), the dome (703) in an unactuated position being spaced from the touch sensitive surface (701) of the switch, and an acoustic wave absorbing material disposed between the deformable dome and the touch sensitive surface such that in response to a force acting on the dome, the dome deforms and contacts the absorbing material and the absorbing material contacts the touch sensitive surface of the acoustic wave switch with sufficient pressure to actuate the acoustic wave switch(see fig. 1, see col. 4, lines 1-2, and fig. 8, col. 6, lines 55-65; fig. 1 related to fig. 8). Scharff et al. does not disclose an actuator overlaying the touch sensitive surface; however, Selig et al. discloses in figs 1-4, a touch system having an actuator overlaying the touch surface (see key 24, fig. 1, 4, see abstract, see col. 5, lines 48-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the using of the actuator disposed over the touch screen as taught by Selig et al. into the system of Scharff et al. for producing the claimed invention because this would be suitable modified for this type of touch screen to interrupt the acoustic signal by using the individual keys and also provide tactile feedback as desired to the user (see col. 4, lines 24-29).

Regarding claims 25-26, Scharff et al. does not disclose the actuator is a defomable dome and is a truncated dome.

Selig et al. discloses in fig. 4, the actuator is a defomable dome and is a truncated dome (see fig. 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the actuator is a deformable dome and is a truncated dome as taught by Selig into the system of Scharff et al. for producing the claimed invention because this would be suitable modified for this type of touch screen to interrupt the acoustic signal by using the individual keys and also provide tactile feedback as desired to the user (see col. 4, lines 24-29).

Allowable Subject Matter

5. Claim 29 is allowed (see previous office action).

6. Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims (see previous office action).

Response To Arguments

7. Applicant's arguments with respect to claims 21-26 and 28-29 have been considered but are moot in view of the new ground(s) of rejection.

Applicant states that "at column 5, lines 44-56 (emphasis added). Scharff is clear - the acoustic absorption of the sealing member must be minimized. As such, Scharff specifically teaches away from positioning an acoustic wave absorbing material between the seal and the touchscreen. Scharff simply does not describe, show, teach or suggest any example in which such a material is positioned between the seal and the touchscreen, and certainly does not describe a separate and distinct acoustic wave absorbing material under a seal, in which the material is configured to contact the touch surface".

Examiner respectively disagrees because Scharff et al. discloses the acoustic absorption of the sealing member even be minimized, but he still does teach that the acoustic absorption material disposed between the seal and touch surface (see col. 6, 61-65).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number is (571) 272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimnhung Nguyen
Patent Examiner
September 6, 2007

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600